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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CASCA, FRED A	

ART UNIT	PAPER NUMBER
2687	

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/085,463	KIM ET AL.	
	Examiner	Art Unit	
	Fred A. Casca	2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Abstract

1. The abstract of the disclosure is objected to because it has less than 50 words. Correction is required. See MPEP § 608.01(b).

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because in FIG. 3, reference character "17" has been used to designate both the plunger and another part. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent No. 6,441,753 B1, Montgomery in view of Patent No. 6,662,244 B1, Takahashi.

Referring to claim 1, Montgomery discloses a wireless telephone (col. 2, lines 39-45, "a telephone, a wireless subscriber device, . . . a cellular or PCS", also FIG. 1) including a display area (col. 2, lines 44-46, "a display screen", FIG. 1, 6) and a keypad area (col. 2, lines 44-45, also FIG. 1, "4"), said keypad area including one button (col. 2, lines 44-51, "a multi-function key assembly", also FIG. 1, "12"), which is movable and depressed to record the selected number, letter or function for dialing purposes (col. 6, lines 1-11, "The multi-function key assembly 12 is capable of being pressed in the direction of any of the key regions 32-48...the depression of a key region 32-48 will cause the closure and activation on a specific popple dome switch 154-156", also col. 7, lines 18-27, "Once a desired key region 32-46 is located, the user may activate the desired key region 32-46 by pushing the button member 22 in the direction of that key region 32-46... Pressing any key region 32-48 causes the plunger 54-68, 72 associated with that key region 32-48 to close the popple switch 154, 156 associated with that plunger 54-68,72. Closing of the popple switch 154,156 sends a signal to the electronic devices is well known", note that the multi-function key is moved in the direction of the desired key and depressed to activate and register the desired key. Pressing the desired key causes the associated plunger to close the associated popple dome switch, and closing of the associated popple dome switch registers the desired number, letter or function by sending a signal to the electronic device).

Montgomery does not specifically disclose the one button is movable to display selected numbers, letters or functions.

However, in the same field of endeavor, Takahashi discloses an information terminal (FIG. 9, "1", and col. 7, lines 18-26, "the portable telephone set 1"), in which a button is pressed to display (FIG. 9, "display section 5", "telephone number 34", "numerical keys 30", FIG. 7,

"touch panel 7", "transmission type LCD 13", and col. 7, lines 18-28, note that an input operation is conducted as the parts of the touch panel 7 corresponding to the selected keys are depressed by the user. Then, the display section 5 displays the information input by the user by depressing the touch panel 7 such as the telephone number 34 to be called) selected numbers, letters or functions.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify Montgomery's invention by providing additional capabilities to the one key button that would include displaying selected numbers, letters or functions as suggested by Takahashi, because the user would be able to see the number he is dialing in order to avoid calling the wrong number.

Referring to claim 2, Montgomery and Takahashi disclose a wireless telephone as in claim 1. Montgomery further discloses that the one button is moved along and guided to number, letter or function locations by channels (FIG. 1-FIG. 4, FIG. 6, FIG. 12, and col. 2, lines 52-56, "button member 22", col. 3, lines 8-12, "The button member 22 includes a plurality of peripheral plungers 54-68 . . . Each of the plungers 54-68 of the lower surface 70 corresponds directly to the perimeter key region 32-46 located directly opposite that specific plunger 54-68 on the upper surface 30", and actuated elements 154 on surface 28 in figure 12, and col. 3, lines 33-37, note that the entire button member 22 with channels on the underside as in figure 4 is used as an extended channel to provide mobility for the multi-function key to move along).

Referring to claim 3, Montgomery and Takahashi disclose a wireless telephone as in claim 2. Montgomery further discloses that the channels include wells located at positions corresponding to a particular number, letter or function (col. 3, lines 8-32, note that the button

member 22 includes plungers which are located at positions corresponding to particular number, or letter or function to actuate elements 154 on surface 28 in figure 12).

Referring to claim 4, Montgomery and Takahashi disclose a wireless telephone as in claim 3. Montgomery further discloses that the number is recorded by depressing the plunger into the well corresponding to the selected number, letter or function (FIG. 2-FIG. 4, FIG. 6, FIG. 12, col. 6, lines 1-11, and col. 7, lines18-27, note that the user pushes the button member 22 in the direction of a desired key region 32-46 and pressing any key region causes the plunger 54-68, 72 associated with that key region 32-48 to close the popple switch 154,156 associated with that plunger 54-68, 72. And closing of the popple switch 154, 156 sends a signal to the electronic device as is well known).

Referring to claim 5, Montgomery and Takahashi disclose a wireless telephone as in claim 1. Montgomery further discloses that the button is a joystick or trackball, which is moved to select, and depressed to send, the selected number, letter or function (col. 7, lines 28-42, "the key assembly 12 may serve as a nine digit numeric keypad in combination with a computer mouse. In a similar fashion, each key region 32-48 may serve multiple functions. For example, the five key region 48 may operate as a conventional zero key upon a double-click". Note that the one button key assembly operates like a computer mouse, and a curser is moved around on a display screen, and five key 48 serves as a "mouse click" or selection function upon depression).

Referring to claim 6, Montgomery discloses a wireless telephone (col. 2, lines 39-45, "a telephone, a wireless subscriber device . . . a cellular or PCS", also FIG. 1) including a display area (col. 2, lines 44-46, "a display screen", FIG. 1, "6"), a one button control for selecting numbers, letters or symbols (col. 2, lines 44-51, "a multi-function key assembly"), and means

controlled by depression of said button for recording (col. 6, lines 1-11, "The multi-function key assembly 12 is capable of being pressed in the direction of any of the key regions 32-48...the depression of a key region 32-48 will cause the closure and activation on a specific popple dome switch 154-156", also col. 7, lines 18-27, "Once a desired key region 32-46 is located, the user may activate the desired key region 32-46 by pushing the button member 22 in the direction of that key region 32-46... Pressing any key region 32-48 causes the plunger 54-68, 72 associated with that key region 32-48 to close the popple switch 154, 156 associated with that plunger 54-68,72. Closing of the popple switch 154,156 sends a signal to the electronic devices is well known", note that the multi-function key is moved in the direction of the desired key and depressed to activate and register the desired key. Pressing the desired key causes the associated plunger to close the close the associated popple dome switch, and closing of the associated popple dome switch registers the desired number, letter or function by sending a signal to the electronic device).

Montgomery does not specifically disclose means for displaying selected numbers, letters or symbols in the display area, means controlled by depression of said button for recording the displayed selected number, letter or symbol, and means for displaying all of the selected numbers, letters or symbols.

Takahashi displays means for displaying selected numbers, letters or symbols in the display area (FIG. 9, "display section 5", "telephone number 34", "numerical keys 30", FIG. 7, "touch panel 7", "transmission type LCD 13", and col. 7, lines 18-28, note that an input operation is conducted as the parts of the touch panel 7 corresponding to the selected keys are depressed by the user. Then, the display section 5 displays the information input by the user by

depressing the touch panel 7 such as the telephone number 34 to be called), and means for displaying all of the selected numbers, letters or symbols (FIG. 9, "34", and col. 7, lines 27-29, "the display section 5 displays the information input by the user by depressing the touch panel 7 such as the telephone number 34 to be called").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify Montgomery's invention by providing means for displaying selected numbers, letters or symbols in the display area, means for displaying all of the selected numbers, letters or symbols as suggested by Takahashi, and means for Montgomery's recording system for recording the displayed selected number, letter or symbol of Takahashi, for the purpose of letting user know which exact numbers, letters or functions are pressed and processed, and also to manipulate the numbers, letters or functions for call processing.

Referring to claim 7, Montgomery and Takahashi disclose a wireless telephone as in claim 6. Montgomery further discloses the wireless telephone including channels and wells formed in printed circuit board (FIG. 1-FIG. 4, FIG. 6, FIG. 12, and col. 2, lines 52-56, "the multi-function key assembly 12 includes a button member 22 and a base member 24 that supports the button member 22 over a popple dome switch array 26 associated with a PC circuit board substrate 28 ", col. 3, lines 8-12, "The button member 22 includes a plurality of peripheral plungers 54-68 . . . Each of the plungers 54-68 of the lower surface 70 corresponds directly to the perimeter key region 32-46 located directly opposite that specific plunger 54-68 on the upper surface 30", and actuated elements 154 on surface 28 in figure 12, and col. 3, lines 33-37, note that the entire button member 22 with channels on the underside as in figure 4 is used as an extended channel to provide mobility for the multi-function key to move along), said wells being

located at number, letter or symbol locations, a plunger associated with said control button adapted to slide along the channels to a selected well location (col. 3, lines 8-32, note that the button member 22 includes plungers which are located at positions corresponding to particular number, or letter or function to actuate elements 154 on surface 28 in figure 12), and means associated with said plunger serving to complete an electrical circuit when the plunger is depressed into a selected well to record the particular number, letter or symbol associated with said well (col. 7, lines 22-27, note that pressing any key region 32-48 causes the plunger 54-68, 72 associated with that key region 32-48 to close the popple dome switch associated with that plunger 54-68,72. Closing of the popple switch sends a signal to the electronic device as is well known). Inherently an electric circuit exists in order for a signal to be sent to the electronic device).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wood et al. U.S. Patent No. 6,810,271 B1 discloses keypads for electrical devices including mobile telephones.

Maeda U.S. Patent No. 5,450,619 discloses input device and display units for a portable telephone apparatus.

Kumano U.S. 5,349,629 discloses a portable telephone with speed dialing that includes display units and keypads.

Wicks et al. U.S. Patent No. 6,519,480 B1 discloses a wireless telephone that uses a trackball to move a curser around on a display screen which has the image of a keypad.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (703) 305-5660. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (703) 306-3016. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELISEO RAMOS-FELICIANO 12/30/04
PATENT EXAMINER